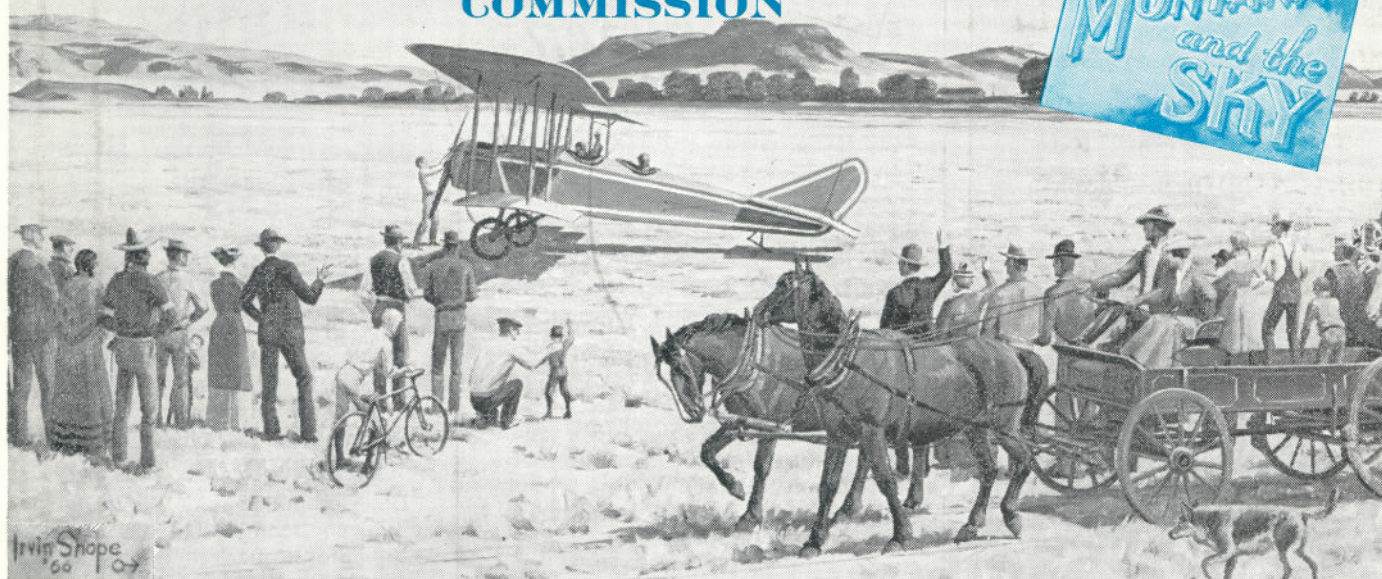


MONTANA AERONAUTICS COMMISSION



Volume 18—No. 4

April, 1967

APRIL 26, 1967 DEADLINE FOR FAAP REQUESTS

The Federal Aviation Administration announced that requests for aid under the Federal-aid Airport Program (FAAP) for Fiscal Year 1968, as authorized by the Federal Airport Act, are now being accepted. **Deadline for requests is April 26, 1967.**

Funds are provided under FAAP to assist cities, counties, states and territories in developing their airport facilities to meet the needs of the national system of public airports as identified by the National Airport Plan. FAAP grants are made on a cost sharing basis with the Federal Government providing generally 50 per cent of the cost of approved projects.

Eligible projects include land acquisition and the development of runways, taxiways, and lighting. Terminal buildings and hangars are not eligible under the Federal Airport Act. Priority will be given to development which offers the greatest public benefit.

Public agencies desiring to apply for aid under FAAP are urged to make early application to the nearest FAA area office where information and assistance also may be obtained.

Write: Federal Aviation Administration, General Aviation District Office, P.O. Box 1167, Helena, Montana 59601.

UNICOM FREQUENCY CHANGES

New Federal Communications Commission rules require that the following UNICOM Stations carry the frequency of **123.0 MC**

**BUTTE
BOZEMAN
LEWISTOWN**

The planned changeover date will be **May 1, 1967**

FAA CHANGES TO ADMINISTRATION

Effective Saturday, April 1, 1967, the Department of Transportation began operating officially as a government department and the Federal Aviation Agency became the Federal Aviation Administration.

The initials FAA and the address, 800 Independence Avenue S. W., Washington, D.C., remain the same. The Zip Code number is changed from 20553 to 20590.

PHOTO CONTEST

The NINETY NINES, INC. (International Organization of Women Pilots) want the most beautiful aerial color photograph of each State and Territory. The prize winning photographs, together with an invitation from each Governor, will be included in the 99s' invitation folio "SEE THE USA." These handsome folios with the invitation to the peoples of the world to visit the USA will be presented to the overseas 99s' who will present them to representatives of their governments. A set of these prints will be sent on a world tour under the sponsorship of the U. S. Travel Service. All the prints will carry the name of the photographer.

This contest is open to everyone—amateur or professional, and does not limit the contestant to his home State or Territory. Only **aerial** photographs in **color** will be considered. Positive transparencies (including slides) or color negatives may be submitted, but each negative must be accompanied by a print not larger than 8" x 10". A maximum of four (4) positive transparencies (including slides) or four (4) color negatives with prints may be submitted and must have been taken within the last three (3) years. Title of photo, State in which it was taken and the contestant's name

(Cont. on page 11, Col. 2)

Official Monthly Publication
of the
**MONTANA AERONAUTICS
COMMISSION**

Box 1698
Helena, Montana 59601

Tim Babcock, Governor

Charles A. Lynch, Director

Carl W. (Bill) Bell, Chairman
Jack R. Hughes, Vice Chairman
Peter H. Black, Secretary
Clarence Anthony, Member
E. B. Cogswell, Member
Gordon Hickman, Member
Walter Hope, Member



HAVRE HANGER FETES W/X PERSONNEL

The members of the Havre Hangar of the Montana Pilots' Association recently hosted a "get-acquainted" pot luck supper for the new personnel of the Weather Bureau Station in Havre. The event, held in the administration building of the city/county airport, honored the following Weather Bureau personnel and wives:

Mr. and Mrs. Grayson Cordell; Mr. and Mrs. Jack Poppe, Mr. and Mrs. John T. Moore, and Mr. and Mrs. Don Brostrom.

Harold Ebaugh, airport manager, was toastmaster and the arrangements were ably handled by Mrs. Walter "Frances" Hensley, Mrs. Sam Bitz, Mrs. Al Ledbetter, and Mrs. Juanita Davis.

* * * *

MAC wishes to extend a hearty WELCOME to the new w/x personnel stationed at Havre.

STATISTICS

Will your first accident be your last day alive?

61/37
65/22
78/18
10/2

	Accident Total	Fatalities
1964 Total	61	37
1965 Total	65	22
1966 Total	78	18
1967 As of this date	10	2



CALENDAR

April 19, Great Falls — Annual Travel Seminar, Rainbow Hotel.

April 24, Great Falls—Great Falls Tower Opening Date.

April 27-30, Las Vegas — International Airport—Exposition of Flight and General Aviation Conference.

April 29-30, Roundup — Montana Flying Farmers Spring Meeting.

May 5, 6, 7, Havre—Montana Pilots Association Convention.

May 6-7, Bakersfield, Calif.—International Championship Stock Plane Air Races will be held at Schafter Airport (Minter Field).

May 20-24, Louisville, Kentucky—40th Annual Business Meeting and Conference, American Association of Airport Executives. Headquarters: Hotel Kentucky.

May 21, 1967—Cut Bank—MPA Hangar's "Aviation Day." Fly-overs, rides, displays and events. **FUN FOR ALL.**

May 21-27, Miami Springs, Florida—"Angel Derby."

June 1, West Yellowstone—Western Airlines commences service for the 1967 season.

June 12-30, Dillon—Western Montana College, Aviation Education Workshop.

June 12, 13, 14, Columbus, Ohio—FLIGHT INSTRUCTORS' RECERTIFICATION COURSE. Sponsored by National Aviation Trades Association, AOPA Foundation, Inc., Link Foundation, Federal Aviation Administration. (Registration—\$35 including all text materials relative to course.)

June 14-July 3, Havre — Northern Montana College, Aviation Education Workshop.

June 19-July 7, Billings—Eastern Montana College, Aviation Education Workshop.

June 19-July 19, Bozeman—Montana State College, "Leadership Workshop."

June 25-28, West Yellowstone—Western Governors' Conference.

June 26-July 19, Bozeman—Montana State University, Aviation Education Workshop.

July 22-23, Benchmark Airport—Dedication. Fly-In and overnight camp out.

FEDERAL AVIATION ADMINISTRATION ITINERARY LISTING



Airport	April	May	June
Culbertson	5		7
Glasgow		10	
Glendive		25	
Great Falls	6	4	8
Lewistown	26		14
Miles City	19		15
Missoula	20	25	22
Sidney		24	

NOTE: Provisions have been made to give private, commercial and flight instructor and instrument written examinations **ON AN APPOINTMENT BASIS ONLY** at the following FAA Flight Service Stations.

Bozeman	Lewistown
Butte	Livingston
Cut Bank	Miles City
Dillon	Missoula

COLONEL BALLOU TAKES COMMAND OF THE 29TH

Lt. Colonel David B. Ballou assumed command of the 29th Fighter Interceptor Squadron during impressive ceremonies held at Malmstrom Air Force Base on March 17, 1967.

Lt. Col. Ballou, assuming command from Commander Lt. Col. George M. Howell, was transferred from the Interceptor Operations Branch of the Air Defense Command Headquarters in Colorado.

Lt. Col. Ballou entered the service in 1943, graduated from pilot training in 1944 and flew in the European theater during 1945. Lt. Col. Ballou has held assignments with the squadron at Minneapolis, Alaska, Wurtsmith AFB, and Grand Forks AFB; and has flown P-51s, F-86s, F-89 Js, F-102s, and the F-101s.

In 1962, he became Sector Fighter Officer for the Grand Forks Air Defense Sector. During 1964, he attended the Royal Canadian Air Force College and was then assigned to the Command Headquarters.

THE SQUADRON

The 29th Fighter Interceptor Squadron is the second oldest fighter squadron in the USAF. Was organized in 1918; deactivated from 1919 until 1923. During World War II, the Squadron was charged primary with the protection of the Panama Canal Zone. It was in the early months of 1945 the P-80 jets were phased into the Squadron. In March of 1953, the Squadron moved to Malmstrom AFB and received the F-94C. Since 1957, the Squadron has been equipped with the F-89H, F-89J, and currently "stands alert" in the supersonic F-101B "Voodoo."

AIRPORT NOTES



By James H. Monger,
Assistant Director, Airports

Conrad

Bids were opened in Conrad on April 5 for the construction of an asphaltic overlay on runway 23/5. Bids were received from Snyder Construction Company of Great Falls, Baltrusch Construction of Havre, and Holland Construction of Billings. The apparent low bidder was Snyder Construction at \$47,026. The overlay project will get underway later this summer when weather permits. This main runway in Conrad is the only soil cement base runway in the State of Montana. Stanley Thill of Conrad is the consulting engineer on this project. This is a local, State, and Federal aid project with the Aeronautics Commission having previously loaned Pondera County \$10,000 to aid them in matching the Federal Aviation Administration funds.

Airport Management Meeting

Missoula is the host city for the 9th Annual Meeting of the Montana Airport Management Association. The meeting will be held on April 14, at the Florence Hotel. Everyone interested in Airport Administration and Airport improvements is welcome to attend.

Wind Socks

The Aeronautics Commission has wind socks for sale to the general public or public airports. The 24-inch diameter, 7-foot long, small airport wind socks cost \$10 each and the 36-inch diameter wind socks for the larger airports cost \$16 each. Upon order and receipt of payment, this office will ship the wind sock postpaid.

Airport Directory Notations

Pilots are informed of the following corrections to be entered into the 1967 Airport Directory.

Broadus Airport has 100/130 octane fuel in addition to the 80/87 octane indicated. Broadus also has a courtesy car available for itinerant pilots.

The Drummond Airport has no telephone on the field, but there is one

available at a ranch one-quarter mile south of the Airport. To open or close your flight plan free from any telephone in Drummond, dial operator and ask for Enterprise 647, this results in a toll-free call to Missoula Flight Service Station. The Enterprise number is paid by the FAA.

The border crossing airstrip at **Sweetgrass, Ross International Airport**, no longer has aircraft fuel available.

The Airport Directory page for **Three Forks** shows a telephone on the Airport. Omit this notation because the nearest telephone is approximately three-eighths of a mile northeast of the Airport at a cafe on the edge of town.

Airport/Airline Meetings

This past month the Montana Aeronautics Commission has organized three separate meetings with Airport Boards and communities regarding their future needs for airline service. The locations involved were Butte, Bozeman, and Helena. In attendance at these separate meetings were, in each case, airport board members, city and county officials, representatives from the Aeronautics Commission, the FAA, and Northwest and Western Airlines.

Gallatin Field of Bozeman now has a runway 6,500 feet long. Everyone was in agreement that the runway should be extended to 8,300 feet in order to accommodate the Boeing 727's. Northwest Airlines has stated that the 727 will be used on this Montana segment as soon as most of the airports are up-dated to handle the aircraft. In each city, the Airlines involved have also suggested approach lighting systems and visual aid slope indicator lights.

The meeting at Butte indicated that the Silver Bow County Airport Board will start plans immediately for the extension of the north/south runway to a total length of approximately 10,000 feet. The runway presently is 6,857 feet long. A detailed engineering study must be made to determine the total possible extension in either direction. Butte eventually will be serviced by pure jets with Northwest using the 727 and Western Airlines using the 737-200 series.

A planning meeting was held in Helena but no definite decision was made on the ultimate runway length and strength needed. The Boeing 727 is most critical on the runway

strength, whereas the Boeing 737 is a problem on the runway length at Montana airports elevations. It is probable that a similar type meeting will be held for the Missoula County Airport in the near future.

Northwest Airlines conducted an engineering flight test with a Boeing 727 throughout their Montana segment on March 31. Their findings were brought forth in the individual meetings.



View of tail section of Northwest's massive 727 fanjet in front of the terminal building during its March 31st check flight stop in Helena.



Discussing the Helena landing are Charles Lynch, MAC Director; Paul Soderlund, NW's operational director (Paul is a native of Billings, Montana) and Helena's airport manager Hugh Kelleher.

Four Air Force C-131B aircraft are making low level flights to gather information about air turbulence existing below 1,000 feet altitude. Flying at dawn, mid-morning and mid-afternoon every other day for a year, the information they gather will be used in designing aircraft for low-level flight.

FAA INSPECTORS' CORNER



By Lee C. Mills,
Supervising Inspector

GADO No. 9

TARGET—YOUR AIRPLANE

Recently a California pilot took off from his home base, a small airport near Los Angeles. His was a VFR departure and there was no FAA facility on the airport, therefore he did not use his radio before or during take-off. En-route he attempted to contact a FAA Flight Service Station, but was unable to do so. His radio was out. In this case it WAS out, completely out. He landed at Bakersfield for a radio check, and found that thieves had stripped away the transmitters, nav units, power supply and other gear in the baggage compartment. They had not touched the instrument panel units. A check of the Ontario, California General Aviation District Office indicates loss of about \$81,000 worth of radio gear from various aircraft in that area.

Airport thieves have a particular fondness for radios, although thefts of such items as Jeppesen Manuals, tail cones and wing tips are not uncommon. At Van Nuys Airport recently, the entire engine mount, cowling and propeller were stripped off a light plane. In another instance, a large truck was driven down the flight line and every controllable propeller was systematically removed.

Theft of aviation gasoline is common, and may be a cause of aviation accidents due to fuel starvation when a pilot neglects to check fuel quantities during preflight.

In other instances thieves arrive at the scene of an aviation accident and "remove" the equipment for the owners.

We do not have many instances in Montana as yet, however, precautions can be taken to keep pilferage to a minimum. Insurance is recommended. If you have not done so list the make, model and serial numbers of your engine, propeller, radios and other accessories with your insurance agent, or keep them on file somewhere other than in the aircraft records. Keep your aircraft locked. Tie down to a well lighted, patrolled area whenever possible, or keep in a locked hangar.

If the aircraft is involved in a forced landing or accident, arrange to keep the wreckage guarded.

Report to the local authorities all instances of pilferage and suspicious actions by unknown persons around the airport.

The FAA is presently conducting a survey to determine the amount of aircraft pilferage going on in this area. Please send us any information you may have regarding this matter in order that we may make a report to our Central Region headquarters.

PEGGY KRUGER SOLOS HELICOPTER

Mrs. James "Peggy" Kruger made a notable mark for Montana's women pilots recently when she made her solo helicopter flight.

After a thorough check with all reliable known sources, it appears definite that Peggy is the "FIRST" woman pilot in Montana to have soloed in a copter.

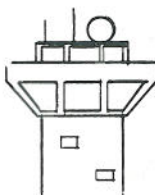
Peggy received her private pilot's license in a fixed wing aircraft in July of 1966, and has set her next goal to obtain her helicopter license in the near future.

Peggy is active in the Cut Bank Hanger of the Montana Pilot's Association and has flown in the statewide Powder Puff Derby.

Peggy is the mother of two daughters—Kim, age 5 and Debbie, age 7. Husband, Jim, is her flight instructor.

* * * * *

We wish to thank Mrs. Carl Johnson of Cut Bank for bringing this accomplishment to our attention. We always welcome aviation news and encourage all our readers to submit items of interest to "Montana and the Sky."



TOWER

OPERATIONS

MARCH, 1967

	Total Operations	Instrument Operations
Billings	9,986	1,476
Great Falls	8,537	953
Missoula	6,624	371
Helena	4,211	241

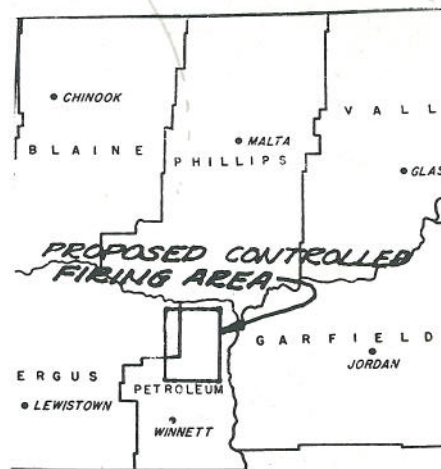
PROPOSED CONTROLLED FIRING AREA FOR MONTANA

The Federal Aviation Administration is evaluating the following proposal:

Establish a controlled firing area for the Montana Army National Guard as follows:

1. Name—Lewistown, Montana Controlled Firing Area.
2. Description.
 - a. The area bounded on the north by latitude 47°33'00" N.; on the east by longitude 108°00'00" W.; on the south by latitude 47°12'00" N.; and on the west by longitude 108°25'00" W.
 - b. Size of the area is: 20 nautical miles east to west and 25 nautical miles north to south.
 - c. Altitudes to be used: Surface to 20,700 feet MSL.
3. Activities conducted: Firing of 105 mm artillery, 76 and 90 mm guns, and 4.2" mortars.
4. Duration of time—May 25, 1967 through June 30, 1967.
5. Using Agency—The Adjutant General, State of Montana.

The site of the proposed controlled firing area is shown on the following map.



"F & E PROJECTS"

The following is from a report of the Federal Aviation Administration, prepared by their Program and Plans Branch.

RELOCATE ATC TOWERS

Great Falls, Montana—April, 1967.

VHF/UHF DE—ESTABLISH

Cut Bank, Montana—January, 1968.

Great Falls, Montana—February 6, 1967.

Lewistown, Montana — December, 1967.

FIFTH MONTANA FLIGHT INSTRUCTORS REFRESHER COURSE COMPLETED

Twenty-three qualified Montana flight instructors completed a concentrated refresher course held in Great Falls, March 20th through March 27, 1967.

The course, sponsored by the Montana Aeronautics Commission in cooperation with the Montana Aviation Trades Association, the Federal Aviation Administration and the United States Weather Bureau-ESSA. The refresher courses were originated in the United States by the Montana Aeronautics Commission in 1962.

GROUND SCHOOL

The ground school portion of the course was held at the O'Haire Manor from 8:45 a.m. until 12 noon daily. Additional classes, held in the facilities of Holman Aviation Company on International Airport, alternated with the training flights in the afternoon.

Instruction was presented by personnel from the Federal Aviation Administration's—Academy in Oklahoma City, Air Traffic Control, Flight Service Station and RAPCON in Great Falls and the General Aviation District Office in Helena.

FAA ACADEMY—Oklahoma City, Okla.



Seated: Thomas H. Clemmitt—Flight Maneuvers, and Wallace B. Montgomery (Team captain)—Instruments and Performance.

Standing: Spence Houghton—Techniques of Instruction; Bruce M. Aikins (U.S. Weather Bureau representative on the team)—Weather; and Frank M. Jamison, Jr.—Psychology of Teaching.

AIR TRAFFIC CONTROL—Great Falls



Lt. to Rt. O. K. Haggbleom, Chief Radar Approach Control; Lee C. Ward, Chief, FAA Flight Service Station; Bernard J. Majerus, Chief, FAA Control Tower, International Airport.

Instructors not pictured: Robert J. Fisher, Watch Supervisor—RAPCON and Controllers for the Air Route Traffic Control Center, Durwood J. Friman and Arthur Holm.

GENERAL AVIATION DISTRICT OFFICE—No. 9—Helena



Lee C. Mills conducting an afternoon session at the airport.



Arthur A. Kurth, supervisor for the flight portion of the course, and class room instructor.



Charles R. Taylor, class instructor during afternoon sessions.

TRAINEE ROSTER

Alderson, Ivan E.—Missoula
 Anderson, Robert W.—Great Falls
 Atlas, Courtney B.—Helena
 Cook, Craig C.—Hamilton
 Deichl, Andrew J.—Billings
 Dunlop, Eugene A.—Helena
 Eisenbart, Allen R.—Billings
 Ferguson, Floyd L.—Kalispell
 Fowell, Michael R.—Belgrade
 Grantier, Charles E.—Lincoln
 Hansen, A. Lloyd—Missoula
 Hebbelman, John H., Jr.—Chinook
 Janey, Jay D.—Helena
 Jones, William F.—Butte
 Magill, Pearl J.—Glasgow
 Maurantonio, Michael—Great Falls
 McDowell, Blake J.—Chester
 McNees, Kenneth E.—Billings
 Patenaude, Armand J.—Red Lodge
 Rayburn, Carol S.—Missoula
 Strand, Myron K.—Kalispell
 Turner, Wayne C.—Bozeman
 Woltermann, Gary G.—Columbus

FLIGHT

The flight portion of this course, under the supervision of Art Kurth, was instructed by six flight line tutors (designated FAA Pilot Examiners):

Jack Hughes, Johnson Flying Service, Missoula.

Robert Lohof, Holman Aviation Company, Great Falls.

Jeff Morrison, Morrison Flying Service, Helena.

James Rothrock, Combs-Pickens, Billings.

David Stradley, Gallatin Flying Service, Belgrade.

Thomas Westall, Dillon Flying Service, Dillon, Montana.

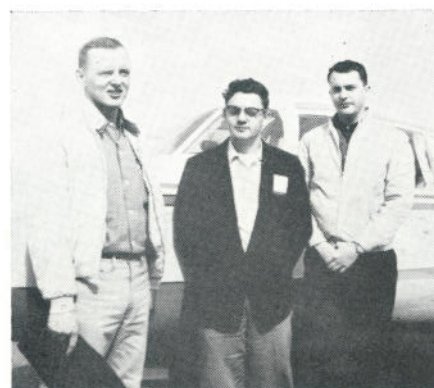
FLIGHT TEAMS



Trainee Allen R. Eisenbart, Lynch Flying Service, Billings; Flight Line Tutor Jack Hughes; Trainee William Jones, Butte Aero Sales, Butte.



Trainees Courtney Atlas, Montana Central Aviation, Helena, and Floyd Ferguson, Glacier View Skyways, Inc., Kalispell; Flight Line Tutor Robert Lohof.



Flight Line Tutor Jeff Morrison; Trainees Kenneth McNees, Hoffmann's Custom Flight, Billings, and Michael R. Fowell, Flight Line, Inc., Belgrade.



Trainee Pearl Magill, Glasgow Airport, Glasgow; Flight Line Tutor Jack Hughes; Trainee Armand J. Patenaude, Red Lodge Airways, Inc., Red Lodge.

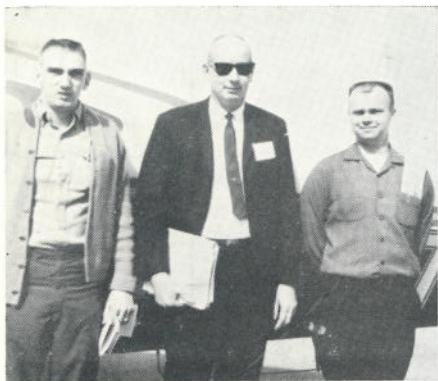


Trainee Charles Grantier, Lincoln Airport, Lincoln; Flight Line Tutor Robert Lohof; Trainee Gary Woltermann, Columbus Flying Service, Columbus.



Trainees Wayne C. Turner, Gallatin Flying Service, Bozeman, and Carol Rayburn, Missoula Skyflite, Inc., Missoula; Flight Line Tutor Jeff Morrison.

FLIGHT TEAMS



Trainee Ivan Alderson, Johnson Flying Service, Missoula; Flight Line Tutor James Rothrock; Trainee Craig Cook, Hamilton Aviation, Hamilton.



Flight Line Tutor David Stradley; Trainees Jay Janey, Morrison Flying Service, Helena and John Hebbelman, Jr., Hebbelman Flying Service, Chino.



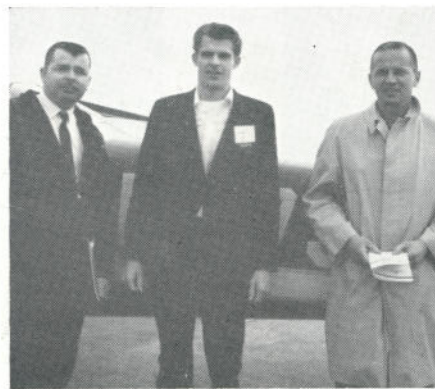
Flight Line Tutor Thomas Westall; Trainees Blake McDowell, Chester Aviation, Chester, and Robert Anderson, Holman Aviation, Great Falls.



Trainees Lloyd Hansen, Johnson Flying Service, Missoula and Eugene Dunlop, Helena High School, Dept. Aero/Related Trades, Helena; Flight Line Tutor James Rothrock.



Trainee Michael Maurantonio, Northern Aviation, Great Falls and Flight Line Tutor David Stradley.



Flight Line Tutor Thomas Westall; Trainees Andrew Deichl, Herrod Aviation, Billings, and Myron Strand, Strand Aviation, Kalispell.

MAC

Charles Lynch, Commission Director, gave a presentation entitled, "Flight Instruction as a Profession." This session, initiated by Mr. Lynch for the 1966 course, covered information on economics and guides for more professionalism of flight school management. After the enthusiastic interest which was shown in the '66 presentation, the class has been incorporated into the course curriculum.

WEATHER

Daily weather briefings were presented by personnel of the Great Falls Weather Bureau Station through arrangements of John Hamilton, Meteorologist in Charge. Briefers were: Art Jacobson, Rd M. Rauch and Earl Robinson.

SYNOPSIS

The 1967 course was considered highly successful from the standpoint of the trainees reactions and the quality of instruction. Following are only a few comments by trainees regarding the course:

"I think the course helped standardize the flight instructor state-wide. There were new points brought up and old subjects reviewed."

"To me it was the most impressive instruction I've ever had."

"I don't think any price could be placed on what I learned and what I am now able to impart to my students."

In addition, the trainees expressed sincere appreciation to the Commission for the presentation of the course and the opportunity given to them. The Commission is grateful not only for the high quality of instruction presented, but also to the trainees and their employers who believe that aviation safety is worth the time and effort expended to attend a refresher course.

MAC STAFF

Jack Wilson (Safety and Education Officer) Course Manager.

C. Joyce McCutcheon (S & E Assistant) Course Secretary.

Jerry Burrows (S & E Technician) Course Aide/Photographer.

AWARDS BANQUET



MATA President, Ed Obie delivering his banquet address. Seated: Mrs. Ed Obie and Mr. Bell.

The Awards Banquet held at Victor's on the airport, was through the cooperation of the Montana Aviation Trades Association. Speakers were: Mr. Carl W. "Bill" Bell, Chairman of the Aeronautics Commission; Mr. Edgar Obie, President of the Aviation Trades Association and Commission Director, Charles A. Lynch.

Excellent entertainment was provided by Trainee, Gary Woltermann who presented several numbers on the electric organ.



The Certificates of Appreciation to the instructors and Certificates of Merit and wing pins were presented to the trainees by Mr. Bell and Course Manager Wilson.

(The Commission holds a special copyright on the wing pins which are awarded exclusively to graduates of the Montana Flight Instructors Courses.)

LADIES ATTEND FOR THE FIRST TIME ON A MONTANA COURSE



Carol Rayburn, one of the two lady flight instructors attending the course, receives her certificate, wings and congratulations from Chairman Bell.



Congratulations from one Glasgow resident to another! Pearl McGill receives her certificate and wings from Chairman Bell. Both lady instructors were commended for their superior professional ability.

FLYING SUMMER WEATHER

By: R. A. Dightman
WBAS—Helena

It is as true in Montana as anywhere that seasons come and go, and each of the four seasons has its individual weather character. The 1966-67 Montana winter produced much less fog than normal in Western Montana, and in many ways the winter was very unusual over all the State—but we could still tell that it was winter. As Montana pilots move into spring and early summer we would like to review some of the weather types that will be with us again now and then after an absence of about six months.

Even though the winter just ended has had more wind than we are accustomed to, spring (if normal) will have more. It is not unusual to have twice as much wind in April as in November. Wind-generated low-level mechanical turbulence over mountains is really an old story—but a story nevertheless that deserves reviewing once in a while.

Then there is the problem of convective turbulence, which reaches its peak about midsummer. The sun will become "higher in the sky" until the summer solstice arrives this year on June 22 at 5:23 a.m. MST (4:23 a.m. if we are on MDT by then). And the higher the sun angle, the stronger the heating of the surface becomes. This surface heating expands surface air, which then rises in bursts of variable size—depending upon the kind of surface heated. Over lakes there is almost no convection on a summer afternoon—in fact, downdraft sometimes occur to compensate for updrafts from heated areas around lake shores. Ever wonder why low-level flight along a lake-shore on a calm, not hot, summer afternoon should be so "choppy"? It is because of the uneven response of differing surfaces to solar heating. Blacktop, green fields, bare ground, and water surfaces vary greatly in their ability to warm the air in contact with them.

Summer convection at times becomes strong enough to produce thunderstorms which are in a class by themselves as troublemakers. There is no such thing as a light or weak thunderstorm. If a convective cloud grows strong enough to have lightning and thunder it is strong enough to be troublesome if one flies into the right (or wrong?) part of it.

Here is another summer phenomenon well worth reviewing.

Then there are things like warm temperatures' reducing takeoff efficiency, the fact that summer cloud tops are almost higher than those of winter (sometimes up to 40 or 50 thousand feet MSL, or even higher), that summer air carries more moisture than winter air, etc. But maybe the above will suggest that now is a good time to prepare for flying in summer conditions. It is a fine season for air travel, but even better if one understands its weather problems. Smooth flying!

AVIATION WEATHER, published in 1965, goes into many of these seasonal changes in a very thorough way. . . . Have you seen a copy?

EX-MONTANA MAN ACCEPTS PROMINENT POSITION

Dale H. Fearn, native of Montana and assistant director to the Aeronautics Commission in the 1950's, has accepted the position of assistant general manager in charge of planning and development at San Francisco's International Airport. In his new post, Mr. Fearn will head a 10 to 15 year redevelopment program.

Dale resigned as airport manager at Lindbergh Field, San Diego, in order to accept the new position. He was the manager at Lindbergh since 1959, and had been active in the planning sessions held by the airlines preceding the design of the new terminal. Dale was hailed by the airport board for helping to make Lindbergh Field what it is today.

Dale originally of Bozeman, Montana, served with the United States Navy in World War II as a member of the "Black Cat" squadron and as an instructor and ground-school supervisor for the Navy's advanced flying.

After the war, Dale earned his bachelor of science degree from Purdue University and specialized in airport management. After residing several years in Helena, employed by the Commission, he was a state consultant on municipal airports and management for Missouri until receiving the appointment at Lindbergh Field.

A hurricane can release as much condensation heat energy each day as the fusion energy of 400 hydrogen super bombs.

CONGRATULATIONS



CERTIFICATES ISSUED RECENTLY TO MONTANA FLYERS

STUDENTS

Cassidy, John Archie—Great Falls
Dozier, Don Stewart—Dallas, Texas
Kenney, Jack L.—Great Falls
Kelley, Ronald C.—Deer Lodge
Kolashinski, Kay S.—Great Falls
McDonnell, Mary L.—Great Falls
Teubert, James R.—Fairfield
Thompson, Bruce A.—Bozeman
Henderson, Stephen E.—Conrad
Nelson, Larry L.—Shelby
Klempel, Donald F.—Bloomfield
Huse, Robert G.—Bozeman
Braun, Robert R.—Bozeman
Lovato, Joseph A.—Great Falls
Limb, Ted B.—Butte
Denison, Maislein B.—Ronan
Gregor, Lawrence J.—Eureka
Birtic, George J.—Baker
Coxwell, Jonathan E.—Martinsdale
Blevins, Kenneth A.—Missoula
Steiner, Edward G.—Missoula
Sterrett, Larry D.—Havre
Nickey, Eugene W.—Black Eagle
Bailey, Myles E.—Butte
Harding, David W.—Simms
Linville, Elmer O.—Missoula
Miller, Robert W.—Missoula
Undem, Jack—Alberton
Wohl, James W.—Missoula
Papke, James A.—Missoula
Smith, Jack E.—Salmon, Idaho
Lundeen, Leonard V.—Harlem
Van Meter, Robert W.—Clancy
Hanson, Steven B.—Melville
Arras, Arthur A., Jr.—Cut Bank
Langhus, Gene D.—Big Timber
Anglemoyer, David H.—Phoenixville, Pa.

Axtell, George J.—Great Falls
Koelzer, Alfred L.—Bozeman
Rigby, Sherman Lee—Salmon, Idaho
Nicholson, John N.—Hogeland

PRIVATES

Robson, Robert B.—Livingston
Lowry, Gordon R.—Missoula
Myhre, Merton P.—Polson
Pack, Ronald E.—Kalispell
Randell, John K.—Shelby
Hahn, Lester L.—Great Falls
Goodrich, James C.—Missoula
Sears, Deborah J.—Great Falls
Harbaugh, Gerald G.—Hamilton

Johannsen, Donald A.—Shelby
 Harsha, Robert W.—Columbus
 Meade, James L.—Great Falls
 Johnson, Harold L.—Cascade
 Chernisky, John B.—Missoula
 Conrad, Percy R.—Cordova, Alaska

ADVANCED AND SPECIALIZED COMMERCIAL

Anderson, Rodney E.—Bozeman
 Aadabah, Ronald S.—Kalispell
 Cunningham, Wm. A.—Great Falls
 Novak, Don G.—Great Falls
 Garrison, Charles E.—Great Falls
 Cain, Alan F.—Missoula
 O'Brien, John V.—Great Falls

INSTRUMENT

Hansen, Arthur L.—Missoula
 McLaren, Douglas C.—Missoula
 Arensmeyer, Walter W.—Choteau
 Cunningham, Wm. A.—Great Falls
 Novak, Don G.—Great Falls
 Garrison, Charles E.—Great Falls
 Cain, Alan F.—Missoula

MULTI ENGINE

Gaither, Shirley M.—Great Falls
 Fisher, Herbert B.—Manhattan
 Alderson, Ivan E.—Missoula
 Cunningham, Wm. A.—Great Falls
 Novak, Don G.—Great Falls
 Garrison, Charles E.—Great Falls
 Cain, Alan F.—Missoula

FLIGHT INSTRUCTOR

Keefer, Craig A.—E. Wenatchee, Wn.

FLIGHT INSTRUCTOR INSTRUMENT

Culver, Robert L.—Missoula
 Archibald, John R.—Kalispell

ADVANCED GROUND INSTRUCTOR

Jackson, William E.—Missoula

INSTRUMENT GROUND INSTRUCTOR

Stohr, Penn R.—Missoula

ROTORCRAFT—HELICOPTER

Downs, Duane L.—Dutton
 Bliss, Herman C.—Kansas City, Mo.
 Rummel, John A.—Helena
 Samsel, Wm. Kent, Jr.—Missoula

SENIOR PARACHUTE RIGGER Back & Chest

Leraas, Monroe J.—Missoula

AIRFRAME MECHANIC

Barnes, Bruce B.—Wolf Creek
 Jorgenson, Richard C.—White Sulphur Springs
 Benjamin, Robert J.—Fort Benton
 Tilton, Raymond L.—Helena
 Betcher, Ralph E., Jr.—Helena

POWER PLANT MECHANIC

Johnson, Patrick L.—Helena
 Wickland, Terry D.—Roundup

SPECIAL PURPOSE/PRIVATE

Barrows, Gary Allan—Calgary, Alta.
 Jordan Edward W.—Calgary, Alta.
 Adams, William David—Calgary, Alta.
 Mitchell, Lawrence R. Calgary, Alta.

A CASE IN POINT

**By Charles A. Smith,
Commission Attorney**

**"INJURY TO AIRPLANE PAS-
SENGERS-DUTY OF AIRCRAFT
OWNER TO PASSENGERS-CONTRI-
BUTORY NEGLIGENCE."**

This case was instituted by a minor plaintiff, acting by his father as his natural guardian, and by the father and mother in their own right to recover damages for personal injuries suffered by the minor through the alleged negligence of the defendant. The defendants' motion for a compulsory nonsuit was sustained by the trial-court and the plaintiff appealed to a higher state court which rendered the decision which follows:

The injuries in this suit were sustained by the minor plaintiff when he stepped from the leading (front) edge of the wing of an airplane and was struck by the revolving propellor. In entering the nonsuit, the trial-court relied solely on the ground that the minor plaintiff was guilty of contributory negligence as a matter of law which constituted a complete bar to plaintiff's suit.

In deciding whether or not the trial-court erred in granting a nonsuit for the above-stated reason, the appellate court first considered the duty of the owner or pilot of an aircraft owes to his passengers. It found that it is a well established rule of law that any carrier for hire owes to his passenger "the highest degree of care and diligence both in transporting him and in enabling him to alight safely." The court further found that the evidence was sufficient to support a finding that defendant did not exercise the degree of care required of him in the circumstances here involved.

The court then considered the question of the passenger's contributory negligence based on the following facts:

On a Sunday afternoon in September, plaintiff and his parents drove out to a nearby airport. Initially, they had gone along to the field to watch the flying, but, on the way there, the minor plaintiff, who was then 16 years old, decided to take a plane ride. He had never been up in an air-

plane before and was anxious to fly over his home. He paid the established price for a 35-minute flight. It so happened, however, that the defendant used up part of the time of the trip in deviating from the intended course for his own purposes and convenience. In order to compensate the passenger for the time so lost, defendant agreed to take him up again for a short ride later in the day. Upon landing from that flight, defendant headed the plane toward the hangar where it was to be kept for the night. To get from the landing area to the hangar, it was necessary to taxi the plane over the car-parking area where several automobiles were parked at the time in such a way as to block the planes ground course to the hangar. Defendant brought the plane to rest headed in the direction of the parking area. It was evening time and part dusk. He did not shut off the engine which was turning the propellor at idling speed of from 500 to 1,000 revolutions per minute. Nor did he warn his passenger that the engine was still running. The minor plaintiff started to alight from the plane, intending to have the obstructing cars moved. He stepped from his seat onto the right wing of the plane, went forward and either jumped or fell off the wing into the propellor.

In adjudging the minor plaintiff guilty of contributory negligence as a matter of law, the trial-court made point of defendant's testimony that there was a sign on the wing in red letters reading, "Dismount at Rear." The appellate court pointed out, however, that there was no evidence as to the size of the letters or as to how visible they were; and that the lower court attached no significance to defendant's further testimony that "they were trampled over quite abit."

The principal ground upon which the trial court based its summary action was an assumption that, had the passenger availed himself of his senses of sight, hearing, and feeling, he would have seen, heard, and felt the movement of the engine and propellor. In this connection, the defendant testified as follows: Q. "In other words, anyone that would be in the plane or about ready to get out would be liable to observe first, the vibration of the plane, secondly, the backwash of the propellor, and third, would be able to hear the engine, is that correct?" A.—"I think so." The court found that this indefinite an-

swer did not unmistakably conclude the matter of the passenger's knowledge and pointed out the same witness' further testimony. Q.—"Now, from your experience as a pilot, when . . . the propellor is idling . . . what can you see when you look straight into it?" A.—"If the sun is shining, you can see a blurr. . ." Q.—"On this occasion, what would it be possible to see?" A.—"Well, you couldn't see anything." At the time of the accident, it was on towards dusk and the sun was down." As to the passenger's ability to hear, the testimony was that, after such a flight, one's sense of hearing is usually affected by "A ringing in your ear . . . for a time." When the witness was asked how much slip stream (i.e., air backwash) one usually gets from idlying propellers, he replied, "not much" and that "it would not be too great at idling speed. . . ." The defendant did say that engine vibration at idling speed is noticeable. But, at most, it was a matter of degree and, since it was explained no further, the question of whether the passenger was aware; or should have been aware, that the engine was running and the propellor was revolving, as the appellate court found, for the jury to decide. The appellate court decided that under the evidence in the case, it was possible for the passenger to have used his senses and still not have perceived that the propellor was in motion.

The accepted rule of law concerning nonsuit is that it may be entered only in a clear case. If there is doubt of the inferences that may be drawn from the oral evidence, it must be submitted to the jury. Thus, considering the evidence and testimony as above-stated, the appellate court found that a compulsory nonsuit in this case was unwarranted. The appellate court held that the record left no doubt that the plaintiffs in the instant case were entitled to go to the jury on the question of the defendant's negligence. Whether they were free of contributory negligence involved issues of relative and comparative facts which only a jury could rightfully resolve. The court said that there is no arbitrary legal standard whereby the trial court could say in view of the testimony given here that the passenger did not use his senses, or if he did, that he must have seen that the propellor was in motion.

Accordingly, the judgment was reversed.

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Entry in this contest indicates contestant's willingness to abide by the contest rules.

ATTENTION AIRPORT OWNERS:

The Airports Division of the Aeronautics Commission is presently compiling revisions for the new Aeronautical Chart. It is requested that all persons having airports to delete or add; and persons having any corrections or suggestions, submit them on the following form and return to the Commission **as soon as possible**.

NOTE: In describing an airport, please be **EXACT**. List by Latitude and Longitude; or by Section, Township, and Range.

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RE: NEW REVISIONS

Montana Aeronautics Commission

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